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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/649,670

08/28/2003

Mitsuo Saitoh

2003_1228A

5686

513 7590 04/18/2007
WENDEROTH, LIND & PONACK, L.L.P.
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WASHINGTON, DC 20006-1021

EXAMINER

OLSEN, ALLAN W

ART UNIT

PAPER NUMBER

1763

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/649,670	Applicant(s) SAITOH ET AL.	
	Examiner Allan Olsen	Art Unit 1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 26, 2007 has been entered.

Specification

The disclosure is objected to because of the following informalities:

Page 19, line 6: "10⁸" should be --10⁻⁸--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13 recites "the potentially controlled first or second electrode". While this clearly allows for either the first or the second electrode to be the "potentially controlled electrode", the examiner notes that claim 13 also recites supplying electric power to one

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of the first and second electrodes while the other of the first and second electrode, that is, the electrode that is not supplied with electric power, is made to have a ground or floating potential. Is the "potentially controlled electrode" the electrode that is supplied with electric power or the electrode that is made to have a ground or floating potential?

The term "vicinity" in claims 13 and 22, the term "close" in claims 16 and 25 and the term "microelectrodes" in claims 15, 16 and 24, are relative terms that render the claims indefinite. The terms "vicinity", "close" and "microelectrodes" are not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Regarding claims 21 and 30, the phrases "such as" and "and the like" render the claims indefinite. With respect to "such as", it is unclear whether the limitations following the phrase are part of the claimed invention. Regarding "and the like", the claims include elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claims unascertainable (see MPEP § 2173.05(d)). Furthermore, with the exception of CF_4 , the compounds that follow the generic formula " C_xF_y " are not fluorocarbons and they do not belong to a group represented by " C_xF_y ".

Claims included in this rejection, which have not been explicitly addressed, have been included because of their dependency upon one of the claims addressed above.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13-16, 19, 22-25 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,102,523 issued to Beisswenger et al. (hereinafter, Beisswenger).

Beisswenger teaches a plasma processing method wherein the plasma apparatus comprising an array of electrodes (see figures 3 and 4) and an opposing plasma source. Beisswenger teaches varying the spacing between the electrode array and the opposing electrode (column 4, lines 25-62).

Claims 13-19 and 22-28 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 6,497,839 issued to Hasagawa et al. (hereinafter, Hasagawa).

Hasagawa teaches an atmospheric pressure plasma processing method wherein the plasma apparatus comprising an array of electrodes with a variable distance between an opposing plasma source electrode. Hasagawa teaches treating material with a volume resistivity of not smaller than less than 10^{-8} ohm·cm. See figures 1, 2 and 10 and column 11, lines 15-50.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20, 21, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beisswenger.

Beisswenger does not teach the gasses from which the plasma is generated.

It would have been obvious to one skilled in the art to use an inert gas and/or a claimed reactive gas because Beisswenger is directed to plasma processing in connection with the fabrication of microelectronic devices and the claimed plasma gases are typical plasma gases used in the fabrication of microelectronic devices.

Response to Arguments

Applicant's arguments, filed January 26, 2007, with respect to the rejection of claims over Fukuda have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

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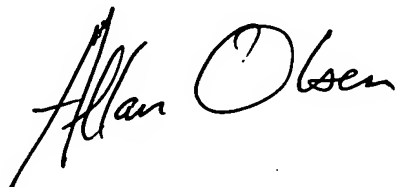
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Olsen whose telephone number is 571-272-1441. The examiner can normally be reached on M, W and F: 1-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Allan Olsen
Primary Examiner
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A handwritten signature in black ink that reads "Allan Olsen". The signature is written in a cursive style, with the first name "Allan" and the last name "Olsen" clearly legible.